

a **DOVER** company

Using Technology to Improve Safety

3rd Eye Digital Solutions



afety Operations Maintenance Fuel Tax / Usage Administration





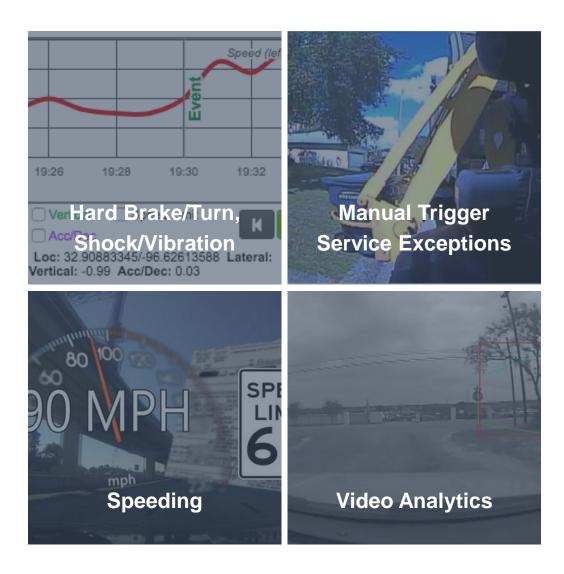


How it Works: Triggered Events

- Event Recording Device
 - Records all installed cameras
 - Audio is recorded
- Gathers Information From:
 - Outside the vehicle
 - Live tracking of truck (GPS)
 - J1939 Information Speed, Telemetry



4 Seconds After







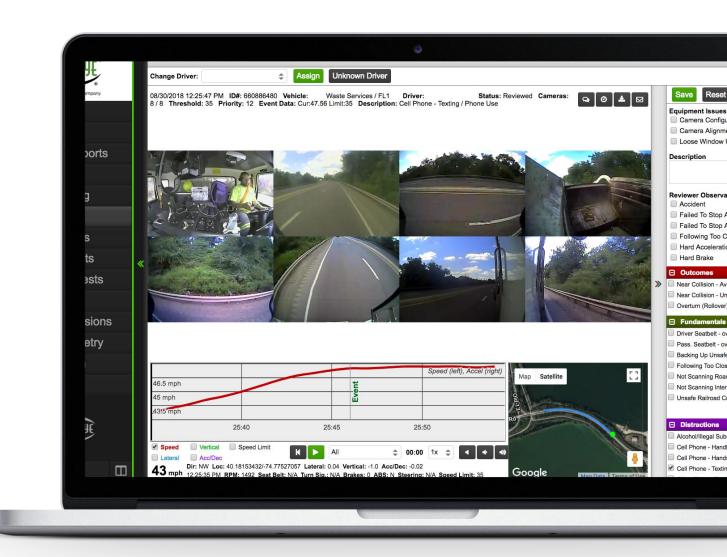
Hardware Features & Design

- Up to 256GB MicroSD card
 Approximately 300 hours)
- Up to 8 cameras recording
- Real time video analytics and driver event processing
- Linux Operating System
- Open architect for future expansion



Protecting your people

- ✓ Up to 6 additional cameras
- ✓ Never miss an accident
- ✓ Reliable Managed Service
- ✓ 25 frames/sec video clips
- ✓ Advanced video analytics



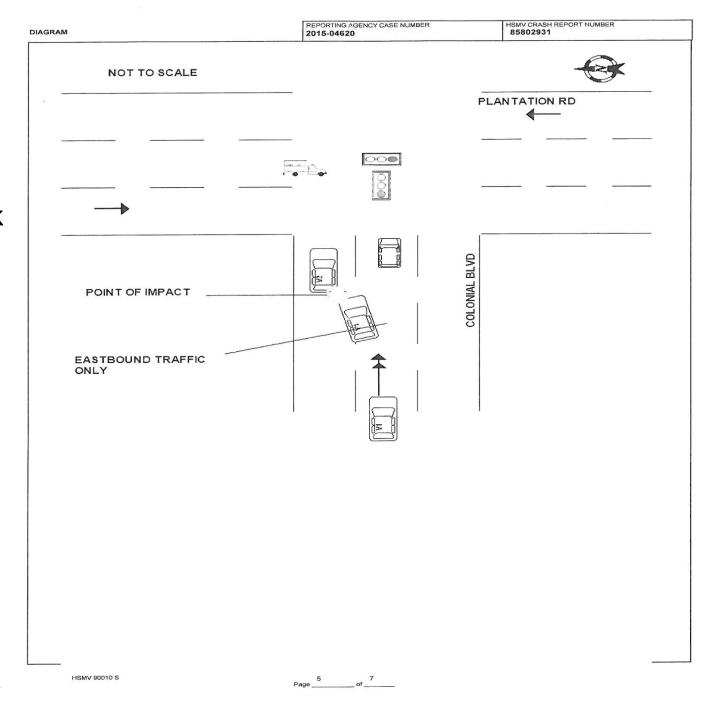


Protecting your people





- Original police report had the roll off truck traveling in center lane.
- Reported stated that the roll off truck changed lanes and created the impact.
- Originally described as a rear end collision, <u>ALL</u> liability was placed on the roll off driver.
- After providing the police with the video from the truck, 100% of the responsibility was transferred from the roll off truck to the utility truck.
- In this case, a picture was worth a couple hundred thousand words.

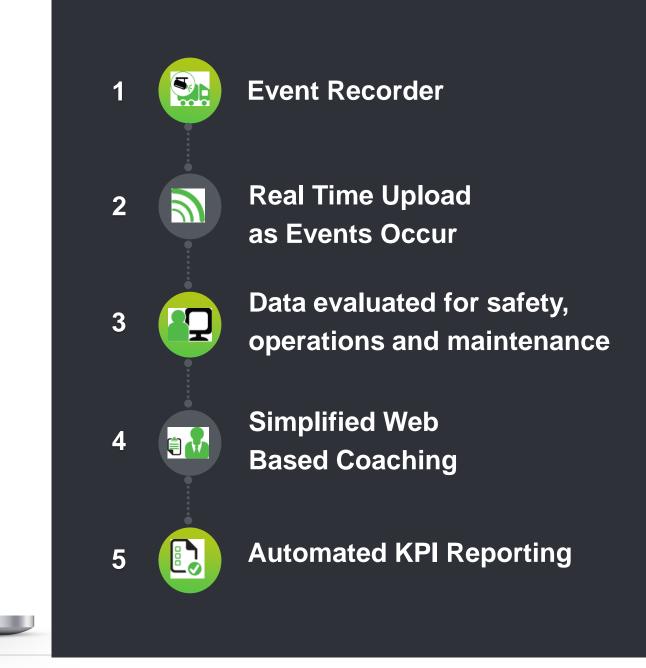




3rd Eye 5 Step Safety Cycle

Easy to use customized web portal for data management and coaching

and orthogona	Status						
Site:	3rd Eye Test Fleet	Range: Last 180 Days 💠 from	to	Reported as of 1	2:28:32 AM		
	bservations / Infractio	ns					
Status	8						
Reports							
Advanced Reports	6						
Fleet	4		•••• • • •		_ .		
Live Streaming		Infractions: 2		1 A A A I	+ 14 M+	1	τπ Α
	2		╷╢╢╢╎┶╎╝┍┥	<u> </u>	A + A + A	-111 AI \ AA	
Driver Events	٨ * * *	**V† N flπhtflπN			रत मेरी	11 11 1 1 1 1	
Service Events	0	Jun 01 Jul 0	1 Aug	01 Sep 0	1	Oct 01	Nov 01
Video Requests			Observation				
Convice Deguasts	oach Effectiveness			Overdue for Coaching			
	ach reedt Brian	Division 3rd Eye Test Fleet	Effectiveness 60%	Date / Time	Event# (ID)	Driver	Type (Infractions)
	VTI Test User	3rd Eye Test Fleet	60%	10/29/18 07:55:34 AM	723633079	1, Driver	ER Obstruction / Abus
Coaching Sessions 3rd	1 Eye Demo	3rd Eye Test Fleet	66%	10/27/18 05:57:18 AM	723519246	1, Driver	ER Obstruction / Abuse
Vehicle Telemetry 4 3rd	1 Eye Reviewer	3rd Eye Test Fleet	66%	10/24/18 11:28:33 AM	722641952	5, Driver TEST, NEW	ER Obstruction / Abus
Nis	shchal Jain	3rd Eye Test Fleet	80%	10/23/18 01:11:09 PM	721211230	DRIVER	Pass. Seatbelt - over 1
Administration 3rd	i Eye Demo	3rd Eye Test Fleet	100%	10/23/18 09:01:02 AM	721198503	5, Driver	ER Obstruction / Abus
Account				10/22/18 02:29:03 PM 10/22/18 01:57:15 PM	719615536 719610455	5, Driver 1, Driver	ER Obstruction / Abuse
				10/22/18 01:57:15 PM	719610455	1, Driver Unknown	ER Obstruction / Abus
						Driver	ER Obstruction / Abus
		📧 📧 1-6 of 6 🕞 🖻			🖲 🕙 1-60 d	f 259 🕟 🗷	
B R	tisky Drivers	Division	Score	Risky Behavior			
	ver 1	3rd Eye Test Fleet	281	ER Obstruction / At		1	
	iver 5	3rd Eye ESG Demo	140	ER Obstruction / At	U50		
Bri	an Test	3rd Eye Test Fleet	134	Driver Seatbelt - over 15	mph		
	hn Madakacherry	3rd Eye Demo	55				
	iver 3	3rd Eye ESG Demo	40	Cell Phone - Texting / Phone	Use		
	iver 2 is Test	3rd Eye ESG Demo 3rd Eye Test Fleet	21	_			
	iver 4	3rd Eye Test Fleet	13	Tampe	ring		
	iver 8	3rd Eve Demo	12	Pass, Seatbelt - over 15	mah		
	st Driver	3rri Eve Test Eleet	12		· –		
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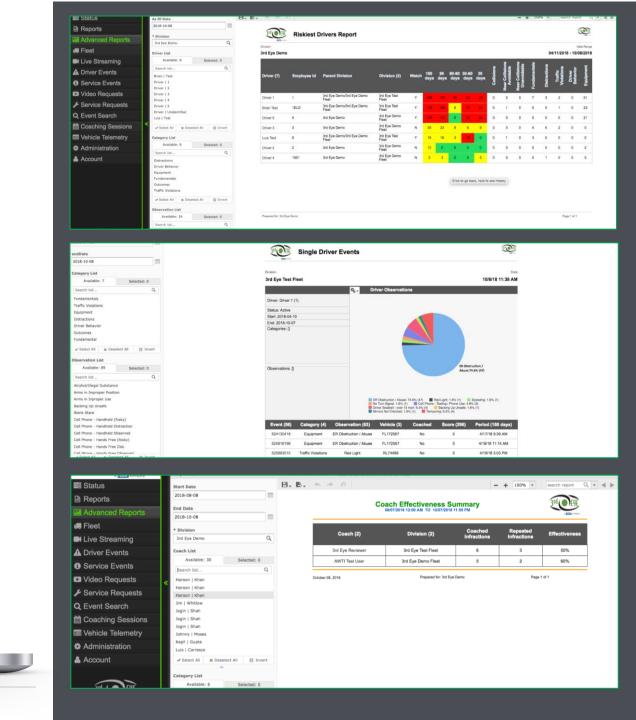




Advanced Safety Reporting

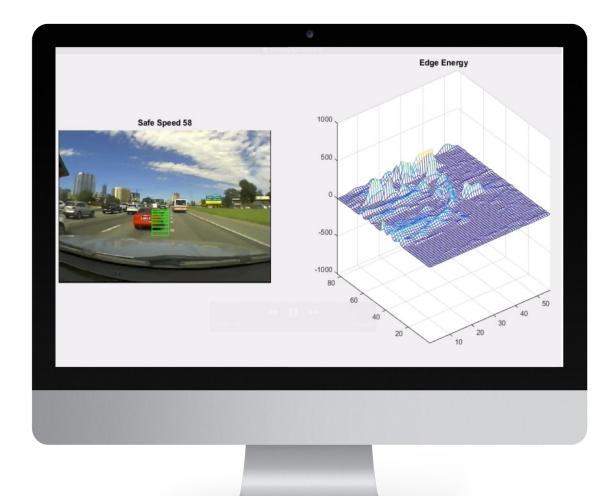
- Custom Real Time Reporting
- Monitor Both Drivers and Coaches

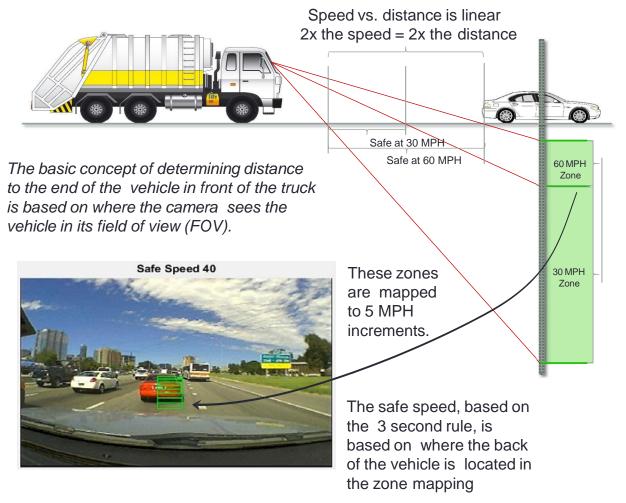






Advanced Video Analytics









Enhanced Awareness

- ✓ Custom KPI Metrics
- ✓ Site Conditions
- Evaluate Productivity
- Identify Opportunities









ENGINE DIAGNOSTICS

Know the health of your engine with key utilization metrics captured in real time.





Know the complete status of your garbage truck's hopper, compactor, and ancillary equipment in real time.



ON ROAD/OFF ROAD Know when your assets are on highway and when they're not with the data to validate



CUSTOM SOLUTIONS Refuse fleet solutions customized for your business needs.

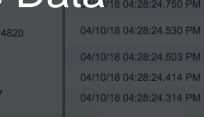


ASL001006 / 1M2AU02C6GM001006 ASL001907 V4 FL162068 V4

Utilizing the Data v18 04:28:24.750 PM

SL001377 V4





Source: Body-DCI

Selected Signals(all):





♦ Signals ✓ All

	Signal
9 Engine	Engine Crankcase Pressure 1
9 Engine	Engine Exhaust Temperature
9 Engine	Engine Percent Load At Current Speed
9 Engine	Engine Speed
	Hydraulic Oil Temperature
	Hydraulic Oil Temperature



Service Verification

Contamination Recognition

Container Overages

1 Import Signa

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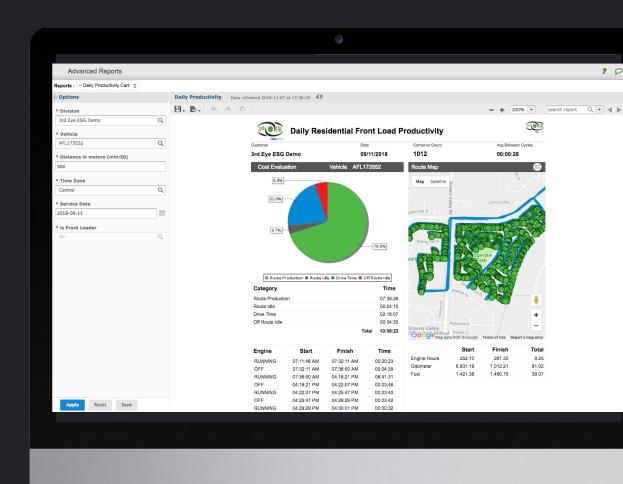


Enhanced Fleet Awareness

- Body / Chassis Telemetry Data
 API / Back Office Integration
- ✓ Detailed Customer Tracking
- ✓ Positive Service Verification
- ✓ Industry Specific Reporting
- ✓ Live Camera Streaming
- ✓ Electronic Logging Device

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Vehicle Telemetry Body Telemetry All S	ignals Supported Signals		
Source: Body-DCI	All A/C High Pressure Fan Switch	Select Signal	
Selected Signals(all):	Accelerator Pedal Position 1 Actual Engine - Percent Torque		
Time	Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature 1 Aftertreatment 1 Diesel Exhaust Fluid Tank Volume	-	Signal
04/10/18 04:28:24.750 PM	Aftertreatment 1 Diesel Oxidation Catalyst Intake Temperature	9 Engine	Engine Crankcase Pressu
04/10/18 04:28:24.750 PM	Aftertreatment 1 Diesel Particulate Filter Differential Pressure Aftertreatment 1 Diesel Particulate Filter Intake Temperature	9 Engine	Engine Exhaust Temperat
04/10/18 04:28:24.530 PM	Aftertreatment 1 Diesel Particulate Filter Outlet Pressure Aftertreatment 1 Diesel Particulate Filter Outlet Pressure	9 Engine	Engine Percent Load At C Speed
04/10/18 04:28:24.503 PM	Aftertreatment 1 Diesel Particulate Filter Soot Load Percent	9 Engine	Engine Speed
04/10/18 04:28:24.414 PM	Aftertreatment 1 Outlet NOx 1 Aftertreatment 1 Purge Air Actuator		Hydraulic Oil Temperature
04/10/18 04:28:24.314 PM	Aftertreatment 1 SCR Intake NOx 1		Hydraulic Oil Temperature
04/10/18 04:28:23.868 PM	Aftertreatment 1 SCR Intake Temperature Aftertreatment 1 SCR Outlet Temperature	9 Engine	Engine Total Fuel Used (H Resolution)
04/10/18 04:28:23.867 PM	Aftertreatment 1 Total Fuel Used Ambient Air Temperature	9 Engine	Engine Oil Temperature 1
04/10/18 04:28:23.751 PM	Barometric Pressure	9 Engine	Engine Exhaust Temperat
04/10/18 04:28:23.750 PM	Battery Potential / Power Input 1 Brake Switch	9 Engine	Engine Crankcase Pressu
04/10/18 04:28:23.704 PM	Calibration Identification		Hydraulic Oil Temperature
04/10/18 04:28:23.599 PM	Calibration Verification Number		Hydraulic Oil Temperature
04/10/18 04:28:23.557 PM	Clutch Switch Commanded Engine Fuel Rail Pressure	9 Engine	Engine Fuel Rate
04/10/18 04:28:23.522 PM	Cruise Control Enable Switch	9 Engine	Engine Speed
04/10/18 04:28:22.880 PM	Cruise Control Set Speed		Hydraulic Oil Temperature
04/10/18 04:28:22.867 PM	Driver's Demand Engine - Percent Torque Engine Amber Warning Lamp Command	9 Engine	Engine Oil Temperature 1
04/40/40 04:20:00 770 PM	Engine Coolant Level 1		

Live Streaming



Service Verification

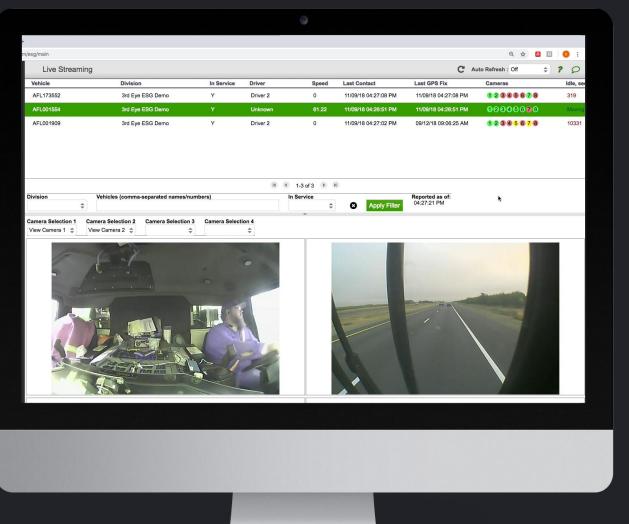
Vehicle Breadcrumb

Vehicle Idling Report

Vehicle Health Report

Live Streaming

Service Verification

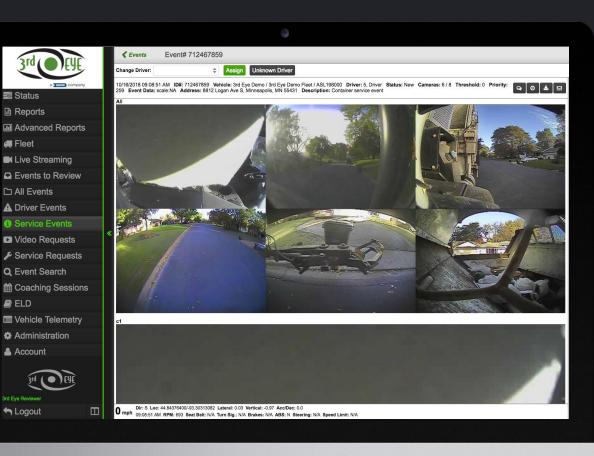


Vehicle Breadcrumb

Vehicle Idling Report

Vehicle Health Report

Live Streaming



Vehicle Breadcrumb

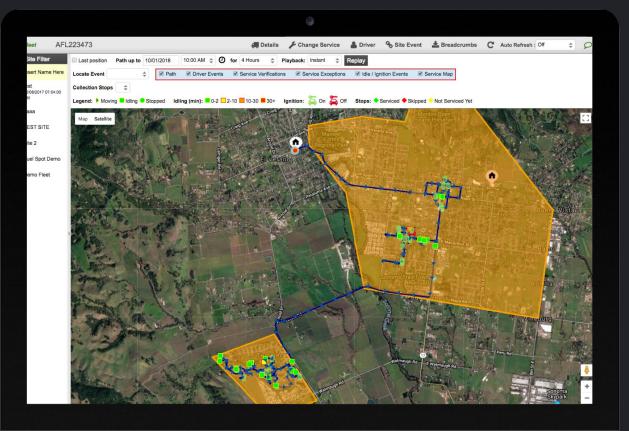
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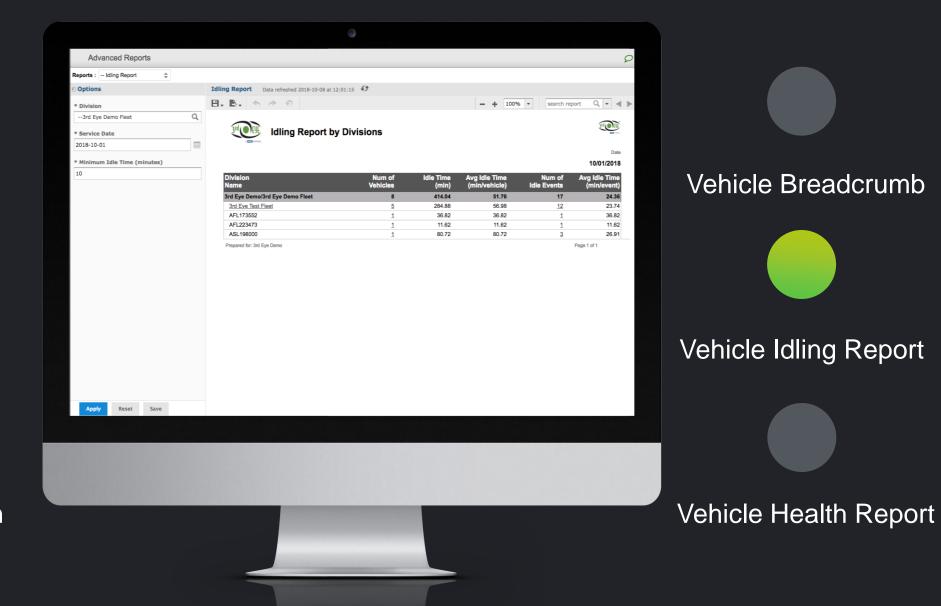
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Live Streaming

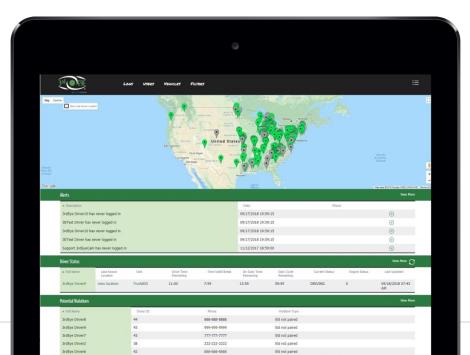
Service Verification

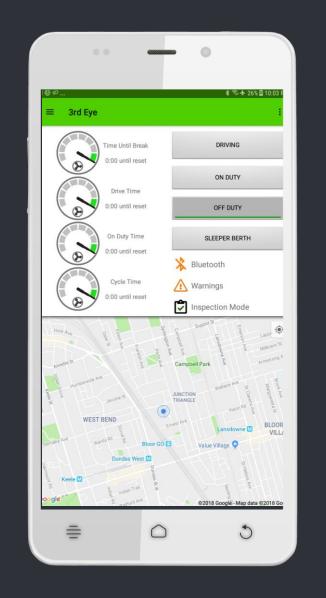
Advanced Reports eports : -- Division Health . Division Health Data refreshed 2018-11-02 at 09:29:29 Option 🗄, 🖹, 🐟 🔶 🔊 - + 120% ▼ search report Q ▼ ◀ ▶ ssue List Available: 5 Selected: 5 3rd OF 3rd EA+ Search list 0 **Division Health Report** Not Connectin Division Date Camera 2 Down 3rd Eye Demo 11/2/18 9:29 AM SD Card Down Vehicle Breadcrumb 0. . Issue Type ✓ Select All X Deselect All II Invert * Division Camera 2 Down 3rd Eye Demo Q Time Zone Not Connecting 2 Central Q amera 1 Down Camera 2 Down: 1 Camera 1 Down: 3 Not Connecting: 2 Division (4) Vehicle (6) Status(1) lssue (6) Reported On Vehicle Idling Report **Division : 3rd Eye Test Fleet** 3rd Eye Test Fleet Heil Truck Active Camera 2 Down 3rd Eye Test Fleet Camera 1 Down Katy_Demo Active Total: 2 Division : ATX_TEST Apply Reset Save Vehicle Health Report

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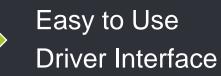
Electronic Logging Device

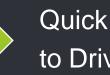
- ✓ Drive Time / Mileage **Automatically Captured**
- ✓ Back Office Management





3rd Eye FMCSA **Compliant APP**





Quick Access to Driver Logs



Use with Android Tablet / Phone